UNIVERSITY OF HAWAI'I COMMUNITY COLLEGES

PROPOSAL TO INITIATE, MODIFY OR DELETE A COURSE

1. TYPE OF ACTION
   A. Addition
      □ Regular □ Experimental □ Other ___________________________ (specify)
   B. Deletion
   C. Modification □ in credits □ in title □ in number or alpha □ in prerequisites □ Other ___________________________ (specify)

2. NEW ALPHA, NUMBER AND TITLE ___________________________ 3. CREDITS ______

4. OLD ALPHA, NUMBER AND TITLE FSHN 185 Human Nutrition 5. CREDITS 3

6. NEW CATALOG DESCRIPTION An introductory level biological science course which integrates basic concepts of science with the study of human nutrition. Designed for students who want an introduction to nutrition, as well as those who later choose to major in it. Meets natural science core requirement.

7. PREREQUISITES Placement in Eng 100 and Math 25 or consent of instructor.

8. STUDENT CONTACT HOURS PER WEEK
   Lecture 3 Lecture/Lab ______ Lab ______ Other (specify) ______

9. PROPOSED DATE OF FIRST OFFERING
   Fall 1997

10. THIS COURSE □ IS REQUIRED □ IS AN ELECTIVE FOR THE WCC ______ PROGRAM/CORE
    □ CAN FULFILL ______ Natural Science ______ REQUIREMENT
    (Please specify) (Please specify)

11. THIS COURSE □ INCREASES □ DECREASES □ MAKES NO CHANGE IN NUMBER OF CREDITS REQUIRED FOR THE PROGRAM/CORE

12. SIMILAR COURSES OFFERED ELSE WHERE:

   College(s): Alpha, Number, Title:
   UH Manoa FSHN 185 Human Nutrition
   LCC FSHN 185 Human Nutrition
   MCC FSHN 185 Human Nutrition

13. THIS COURSE IS □ ALREADY ARTICULATED □ APPROPRIATE FOR ARTICULATION □ NOT YET APPROPRIATE FOR ARTICULATION
    (Provide details of existing or desired articulation (date, college(s), purposes, pre-major or major, etc.)
    Same course offered at Manoa, where it meets Natural Science core requirement as well as pre-requisites for other colleges.

14. REASON FOR INITIATING, MODIFYING OR DELETING COURSE OR OTHER PERTINENT COMMENT:
    Course offered on other campuses. Information in course of great interest. Meets Natural Science core.

REQUESTED BY: ___________________________ Date: 10-3-97

APPROVED BY: ___________________________ Date: 10-21-97

Curriculum Committee

Date: 11/4/97

Faculty Senate

Date: 12/20/98

Dean of Instruction

Date: 3/24/99

Provost

Date: 4/21/99

Change recorded by Catalog Preparer: 3/24/99

CCCM #6100

(Amended for WCC use Sept. 1991)
## Levels of Review of Course Proposals at WCC

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<tr>
<td>Jacqueline R. Male</td>
<td>10-3-97</td>
</tr>
<tr>
<td>Department Chairperson</td>
<td></td>
</tr>
<tr>
<td>Was this course discussed in a dept. mtg.</td>
<td>Yes</td>
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<td>Assistant Dean of Instruction</td>
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<th>10-21-97</th>
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WCC FORM FOR COURSE MODIFICATION

Course FSHN 185 Submitted by J. Maly Date 8/25/97

1. What change is proposed in the course? Provide specific information comparing both the “new” and “old” course.

There are currently no prerequisites for the course. I propose requiring placement in MATH 25 and ENG 100, or consent of instructor.

2. What is the rationale for the change?

For the semesters that this course has been taught at WCC, the students who have no math skills (i.e., do not recognize a fraction as a division function and do not know how to calculate calories if you eat two servings of something) do not succeed in the class.

3. Is the change substantive enough to require a change in course identification? If so, explain thoroughly.

No

4. Is the course articulated with any 4-year program? Yes

If yes, give details of the agreement(s) and explain any impact the proposed modifications may have on articulation.

It is currently articulated with UH Hilo. Since they “assume” college level skills for admission, this prerequisite brings us in line with them.

5. Provide details of any additional staff, equipment, facilities, library/media material, faculty preparation and other financial considerations that would be required to implement this course modification. What has been done to provide for these additional costs? Who will teach the course? Is additional preparation needed?

None

6. Will this course modification result in any alterations in the number of hours required to attain a certificate or degree? No

If yes, provide details and justification for these alterations.

7. If the course is renumbered to 100 or above, does it meet the criteria for transfer level courses? (See attached criteria for transfer courses.)

NA

WCC 9/91
To: The Curriculum Committee

From: Jacquie Maly

Subject: Reconsideration of a previous action

Thank you very much for the time you are taking to reconsider my request for prerequisites for the Human Nutrition course. In some ways, I feel that you may have thrown the baby out with the bath when you denied my request. There was also the matter of an English prerequisite which, I understand was not discussed because you focused in on the Math part. The text and the vocabulary of the course make this very important.

I have amended the prerequisite to state “eligibility” for placement in Math 25. What I meant all along was that students who chose to take FSHN 185 would be able to handle the problem solving skills taught in high school algebra and/or Math 24. My experience with the students who have taken the course over the past two years clearly indicates that those who do not possess these skills are at a distinct disadvantage in accomplishing the homework assignments and several of the specific exam questions. Please consider the following:

1. As of last week, the course is now articulated with Manoa (yea!!). This should have been no surprise as the course here was designed to be isomorphic with the Manoa course. Students here do many of the same assignments and many of the exam questions used at Manoa are included in midterms and finals here. Manoa “assumes” that students come to them with basic English and Math skills (evidenced by the lack of developmental and remedial options on that campus). Those students who take the course here and who are not adequately prepared, are at a significant disadvantage.

2. In my original request for the Math prerequisite, I fear that I focused on the worst case scenario. I have had a number of students (none of whom have completed the course) who lacked basic arithmetic calculation skills. They really did not know that A/C meant “divide A by C”. Even if I told them the order of calculations to determine percentages, they were unable to do the calculation. Such skills are really a minimum, and if you can not accept that even more is needed to succeed at this biology course, clearly at least that level must be set to properly advise students who need remedial work.

3. However, in addition to the basic calculation skills, there is much more to the work of nutrition. Working out basic Calorie needs requires putting several calculations together. Working out Calorie content of foods requires knowing the Calories for each of the energy compounds (fats, carbohydrates, proteins, alcohol), finding the proportions, multiplying each factor, then adding them together, and in some cases
noting that you need to divide by serving sizes. These are "problem solving" skills. I have included examples of the assignments in the course (used both at Manoa and at WCC) for your consideration.

Especially, please note questions 6 and 7 on page 85 of the green assignment.

4. I have included some of the actual questions found on the midterm exam for this course in October, 1996. Please consider what level of math skills are necessary to answer these correctly.

A. Assume you ate the following foods in one day: 8 ounces of milk, 2 tsp. of butter, 2 tbs. syrup, 3 pancakes, 1 medium banana, one hamburger (bun, 4-ounce meat patty) with 2 tbs. catsup, 1 ounce American Cheese, 2 ounces of potato chips, 1/2 cup cooked peas, 3/4 cup of white rice, 4-ounce pork chop, 1/2 cup chocolate ice cream. Using the Food Guide Pyramid as a standard, your food record reveals.

A. you are short in the bread, cereal, pastas, fruits, and vegetables.
B. you are short in all the groups except meat.
C. you are short in the fruit and vegetable groups.
D. you just made the minimum servings for each group.

B. The RDA for thiamin is 1.2 mg. and if a person consumes at least 67% of the RDA they are considered to be consuming a fairly health level for that nutrient. If a person consumed the following foods: chicken 3 ounces (.01 mg./ounce); cereal 8 ounces (.05 mg./ounce) and milk 8 ounces (.01 mg./ounce), what statement could you make about the person's thiamin intake?

A. They are exceeding the RDA for thiamin by 10%.
B. They are close to 100% of the RDA.
C. They are below 67% of the RDA.
D. They are at 75% of the RDA.

C. It is recommended that physically active people consume at least 50% of their kcalfories from carbohydrate. You consider yourself an active person and generally consume 2000 kcalories; How many grams of carbohydrate would you need to meet the goal of 50% from carbohydrate?

A. 1000 grams
B. 110 grams
C. 250 grams
D. 500 grams
D. If a food has 8 grams of fat, 10 grams of carbohydrate, and 4 grams of protein, its total calorie content is

A. 92
B. 112
C. 128
D. 166

E. If a person consumes 3000 total calories, how many grams of fat could this person consume and meet the guidelines for fat in the diet?

A. 50 grams
B. 60 grams
C. 100 grams
D. 200 grams.
THE SCIENCE OF HUMAN NUTRITION

Semester: Fall - 1995
Course Title: The Science of Human Nutrition
Course Number: Food Science and Human Nutrition - 185 (3 cr.)
Course Description: An introductory level biological science course which integrates basic concepts of science with the study of human nutrition. It is designed for the student who wants an introduction to nutrition as well as for those who may later choose to major in it. (3 hrs. lecture)

Core Requirements: This course meets core requirements for a biological science at WCC and UHM.

Final Exam: Is scheduled for ________________.


Prerequisites: none

Activities required at other than class times: Yes. It is expected that you will come to class well prepared with the assigned readings and other work done.

Instructor: Dr. Jacqueline Maly
Office: Iolani 103 (check door for posted office hours)
Phone: 235-7317 (office) 247-6866 (home)

Course Objectives:

Upon successful completion of this course, students should be able to:

1. use a food group plan or the U.S. Dietary Guidelines to evaluate the nutrient adequacy of their diet.
2. identify factors that influence why they eat as they do and how to make changes in their diet.
3. describe what nutrients are and state basic information about each of six categories of nutrients (e.g., functions in the body, risks of excesses/deficiencies, sources, guidelines for intake).
4. compare the various types of nutrition research with respect to type and reliability of information produced/
5. define malnutrition as over- and undernutrition and discuss its causes, cures, and associated health effects.
6. discuss current issues related to the safety of the food supply using concepts from toxicology.
7. describe physiological changes that occur during the life cycle and explain the changes in nutrient needs that accompany these changes.
8. discuss how alcohol and other drugs interact with nutritional processes.
Course Grades:

1. Master the material selected and presented in the course.

   TASK - Earn at least a grade of 60% on an in class, without references midterm exam. This exam makes up 1/3 of your grade.

   TASK - Earn at least a grade of 60% on in-class, without references final exam. This exam makes up 1/3 of your grade. (Special notes: The final exam covers the whole semester's work.

   TASK - (A) Your will be required to produce a satisfactory report on the evaluation of selected nutrients of three days of your own eating habits, compared to USDA recommendations and make recommendations for improvement. (B) Perform assigned activities and homework assignments aimed at evaluating eating habits and interpreting and evaluating nutritional information. (C) There will be a number of short, in-class quizzes. The sum of points earned on the nutrition report, quizzes, and homework assignments will count for 1/3 of your grade.

Method of Grading:
Students accumulate points for each of the activities outlined above (1/3 midterm exam: 1/3 from the final exam; 1/3 from nutrition report, homework, and quizzes). After having met the minimum requirements of each objective stated above, points will be translated into letter grades in the following manner:

A = 90% or higher
B = 80% - 89%
C = 70% - 79%
D = 60% - 69%
F = less than 60% of the possible number of points, not meeting the minimum requirements on any individual task, or vanishing.
NC = arrangement between the student and instructor
W = formal withdrawal from the course by student (see College Catalog)
I = Incomplete, will be given to a student with reasons considered valid by the instructor and with a plan presented by the student for the completion of the course material.

Mode of Instruction:
Lecture/discussion/demonstration will be the major mode of instruction. The major learning rests heavily on study and preparation.
Additional Information:

No paper will be accepted after the due date and time for that assignment. No paper will be accepted (other than required assignments and quizzes) during the last full week of instruction.

No make-up quizzes will be given. Quizzes are given at the start of the period. If you are late to class, you will have less time to work on the quiz. If you leave class early, your quiz will not be counted.

Students missing an exam need to consult with the instructor (with exceptionally good excuse prepared).

Students are expected to attend and participate in all lectures, discussions, and activities. Good preparation for class is important.

The instructor should be regarded as a resource person. If you need help, ask for it. The easiest time to consult with the instructor is before or after class, or during office hours. Otherwise, set up an appointment. Or phone in questions.

There are many hand-out materials for this course. If you are absent, ask a classmate to take a copy for you. If you misplace your materials, additional copies may not be available from the instructor as only the number of copies needed for a section are usually run. (It's a matter of ecology.)

It is the student's responsibility to be informed of any announcements or changes in the course.
**Class Schedule**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Introduction to characteristics of scientific research. How food affects you. Why you eat as you do. Documentation of nutrition research.</td>
</tr>
<tr>
<td>4.</td>
<td>Energy sources (cont.)</td>
</tr>
<tr>
<td>5.</td>
<td>Carbohydrates and alternative sweeteners. <strong>DUE</strong>: First draft of nutrition report.</td>
</tr>
<tr>
<td>7.</td>
<td>Proteins.</td>
</tr>
<tr>
<td>9.</td>
<td><strong>Midterm exam.</strong> Eating disorders.</td>
</tr>
<tr>
<td>10.</td>
<td>Vitamins.</td>
</tr>
</tbody>
</table>
ASSIGNMENT #3
DETERMINING A DAILY "FAT BUDGET"

Most current recommendations for total dietary fat intake suggest we consume no more than 30% of our kilocalories from fat. This assignment will help you compare your fat intake to these recommendations.

This assignment has 2 parts: 1) estimating your total daily energy expenditure and calculating your personal "Fat Budget" (or recommended UPPER LIMIT for daily fat intake); 2) recording a typical day of eating to estimate your typical calorie and fat intake.

Part 1: Determination of Your "Fat Budget"

To estimate approximate daily kcaloric intake, follow directions for C/G Act On Fact 8.1, pp 252 & 253, as modified below and explained in Basic Calculations for FSHN 185 in this supplementary packet. Round off your calculations to the nearest kcal (no decimal needed).

1. Estimate RMR (resting metabolic rate):

A. Current body weight in lbs: _______lb  Height: _____ ft _____ in
   Divide by 2.2 lb/kg = BW (kg) ______kg

B. Sex _____ M  _____ F
   Age range _____ to _____ (see Table A, p. 252, C/G text)
   Equation to use (from Table A) Note: if you are age 18, use formula for 18-30.

   RMR Equation: ____________________________ (5 points)

   Therefore RMR = ____________________________

2. Estimate TEE (thermic effect of exercise):
   (Note that this is NOT the method used in your text)

   How physically active are you?  Level of Activity  % of RMR
   ________________________________________  __________________________
   Not very active 30-40%
   Moderately active 40-50%
   Very active 50-100%

   TEE (energy expended in physical activity) for most students is between 30 and 50% of RMR. Decide which activity level is characteristic for you; choose one number only to represent your "overall activity."

   RMR (from above) _______ kcal
   Factor for activity level _______ (e.g., 30% = 0.3)
   TEE = RMR X factor _______ kcal
7. Use the following table to record a typical day of eating. Review pages 58 & 63 in C/G before recording your foods. DO NOT COPY the values from the C/G example.

<table>
<thead>
<tr>
<th>FOOD OR BEVERAGE CONSUMED</th>
<th>AMOUNT CONSUMED</th>
<th>FOOD ENERGY (kcal)</th>
<th>TOTAL FAT (g)</th>
<th>SOURCE OF DATA ** see below</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

** Data Source Codes:

C&G = Appendix of Text
Label = Data on Nutrition Label
Other: Please Specify

** Kcal from Fat: \( B \times 9 \) kcal/g fat
\% of Kcal from Fat: \( \frac{C}{A} \times 100 \)
Countdown on Fats

Fats have a whopping 9 calories per gram. That's more than twice as much as either carbohydrates or protein. Cutting back on fats can help trim your waistline, as well as reducing your risk of heart disease and cancer. Countdown on fats contains a few sources of fat in our diets and healthier alternatives. All meats are cooked. (RC= Reduced Calorie, MW = Microwaved, NA = Not Available).

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Serving Size</th>
<th>Calories</th>
<th>Fat (grams)</th>
<th>%calories from fat</th>
<th>Saturated Fat (grams)</th>
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<tbody>
<tr>
<td>Avocado</td>
<td>1/4 cup</td>
<td>102</td>
<td>10.0</td>
<td>89%</td>
<td>1.5</td>
</tr>
<tr>
<td>Beef - T-bone steak with fat</td>
<td>3 ounces</td>
<td>253</td>
<td>18.0</td>
<td>64%</td>
<td>7.3</td>
</tr>
<tr>
<td>Beef- round steak, select, lean</td>
<td>3 ounces</td>
<td>166</td>
<td>3.9</td>
<td>21%</td>
<td>1.3</td>
</tr>
<tr>
<td>Beef - ground - regular fat</td>
<td>3 ounces</td>
<td>246</td>
<td>20.5</td>
<td>75%</td>
<td>6.9</td>
</tr>
<tr>
<td>Beef - ground - 17% fat</td>
<td>3 ounces</td>
<td>217</td>
<td>13.9</td>
<td>58%</td>
<td>5.5</td>
</tr>
<tr>
<td>Beans - kidney</td>
<td>1 cup</td>
<td>230</td>
<td>1.0</td>
<td>4%</td>
<td>0</td>
</tr>
<tr>
<td>Butter</td>
<td>1 tablespoon</td>
<td>100</td>
<td>11.4</td>
<td>100%</td>
<td>7.1</td>
</tr>
<tr>
<td>Cheese - cheddar</td>
<td>1 ounce</td>
<td>114</td>
<td>9.4</td>
<td>74%</td>
<td>6.0</td>
</tr>
<tr>
<td>Cheese - mozzarella (skim)</td>
<td>1 ounce</td>
<td>72</td>
<td>4.5</td>
<td>57%</td>
<td>2.9</td>
</tr>
<tr>
<td>Cheese - &quot;RC&quot;</td>
<td>1 ounce</td>
<td>50</td>
<td>2.0</td>
<td>36%</td>
<td>1.0</td>
</tr>
<tr>
<td>Chicken - breast, with skin</td>
<td>3 ounces</td>
<td>169</td>
<td>6.6</td>
<td>35%</td>
<td>1.9</td>
</tr>
<tr>
<td>Chicken - breast, no skin</td>
<td>3 ounces</td>
<td>141</td>
<td>3.1</td>
<td>20%</td>
<td>.9</td>
</tr>
<tr>
<td>Egg- whole</td>
<td>1 large egg</td>
<td>75</td>
<td>5.0</td>
<td>60%</td>
<td>1.6</td>
</tr>
<tr>
<td>Egg - white</td>
<td>1 large white</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fish - tuna (water packed)</td>
<td>3 ounces</td>
<td>116</td>
<td>2.1</td>
<td>16%</td>
<td>.6</td>
</tr>
<tr>
<td>Fish - tuna (oil packed)</td>
<td>3 ounces</td>
<td>169</td>
<td>7.0</td>
<td>37%</td>
<td>1.3</td>
</tr>
<tr>
<td>Margarine - hard type</td>
<td>1 tablespoon</td>
<td>108</td>
<td>12.0</td>
<td>100%</td>
<td>2.4</td>
</tr>
<tr>
<td>Margarine - &quot;RC - Mazola&quot;</td>
<td>1 tablespoon</td>
<td>50</td>
<td>5.7</td>
<td>100%</td>
<td>1.0</td>
</tr>
<tr>
<td>Mayonnaise - regular</td>
<td>1 tablespoon</td>
<td>99</td>
<td>11</td>
<td>100%</td>
<td>1.6</td>
</tr>
<tr>
<td>Mayonnaise - &quot;RC&quot;</td>
<td>1 tablespoon</td>
<td>40+</td>
<td>4+</td>
<td>90%</td>
<td>varies</td>
</tr>
<tr>
<td>Milk - whole (3.3%)</td>
<td>1 cup</td>
<td>150</td>
<td>8.2</td>
<td>49%</td>
<td>5.1</td>
</tr>
<tr>
<td>Milk - 2%</td>
<td>1 cup</td>
<td>121</td>
<td>4.7</td>
<td>35%</td>
<td>2.9</td>
</tr>
<tr>
<td>Milk - 1%</td>
<td>1 cup</td>
<td>102</td>
<td>2.6</td>
<td>23%</td>
<td>1.6</td>
</tr>
<tr>
<td>Milk - non fat</td>
<td>1 cup</td>
<td>86</td>
<td>&lt;.5</td>
<td>5%</td>
<td>.3</td>
</tr>
<tr>
<td>Oil - any type</td>
<td>1 tablespoon</td>
<td>120</td>
<td>13.3</td>
<td>100%</td>
<td>1.12</td>
</tr>
<tr>
<td>Peanut - oil, roast</td>
<td>1/4 cup</td>
<td>210</td>
<td>17.8</td>
<td>76%</td>
<td>2.5</td>
</tr>
<tr>
<td>Peanut butter - most types</td>
<td>1 tablespoon</td>
<td>95</td>
<td>8.1</td>
<td>77%</td>
<td>1.5</td>
</tr>
<tr>
<td>Popcorn - MW - regular</td>
<td>3 cups</td>
<td>100</td>
<td>6</td>
<td>54%</td>
<td>NA</td>
</tr>
<tr>
<td>Popcorn - MW - &quot;RC&quot;</td>
<td>3 cups</td>
<td>60</td>
<td>2</td>
<td>30%</td>
<td>NA</td>
</tr>
<tr>
<td>Pork - bacon</td>
<td>3 slices</td>
<td>109</td>
<td>9.4</td>
<td>78%</td>
<td>3.3</td>
</tr>
<tr>
<td>Pork - bologna</td>
<td>1 ounce</td>
<td>211</td>
<td>17.6</td>
<td>75%</td>
<td>5.9</td>
</tr>
<tr>
<td>Pork - loin/lean</td>
<td>3 ounces</td>
<td>205</td>
<td>10.9</td>
<td>48%</td>
<td>3.8</td>
</tr>
<tr>
<td>Pork - ham (5% fat)</td>
<td>3 ounces</td>
<td>124</td>
<td>4.7</td>
<td>34%</td>
<td>1.5</td>
</tr>
<tr>
<td>Salad drsg - Blue cheese</td>
<td>1 tablespoon</td>
<td>77</td>
<td>8.0</td>
<td>94%</td>
<td>1.5</td>
</tr>
<tr>
<td>Salad dsg - &quot;RC Blue cheese&quot;</td>
<td>1 tablespoon</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tofu, raw, firm</td>
<td>1/2 cup</td>
<td>94</td>
<td>5.9</td>
<td>56%</td>
<td>.9</td>
</tr>
<tr>
<td>Turkey - ground: 7.5% fat</td>
<td>3 ounces</td>
<td>121</td>
<td>6.4</td>
<td>48%</td>
<td>1.7</td>
</tr>
</tbody>
</table>

ASSIGNMENT #2
UNDERSTANDING AND USING THE NEW FOOD LABELS

The purpose of this assignment is to familiarize you with the information available on food labels. If you use this information when purchasing and consuming food, you can have more control over the nutritional quality of your diet.

This assignment has 2 parts: 1) understanding what's on the total food label and 2) understanding the new nutrition information panel, "Nutrition Facts". BEFORE YOU GO ANY FURTHER:

1. FIRST READ THE TWO ARTICLES FROM FDA CONSUMER ("Food label close-up" and "Nutrition facts: to help consumers eat smart") AND THE SHEET, "NUTRIENT CLAIM DEFINITIONS," THAT ARE INCLUDED IN THIS PACKET, FOLLOWING THIS ASSIGNMENT. You may also want to scan the entries in the C/G index (p. I-5) under "Food labels", for further information.

2. THEN, OBTAIN A COMPLETE LABEL FROM A FOOD PRODUCT; MAKE CERTAIN IT CONTAINS ALL THE INFORMATION REQUESTED IN THIS ASSIGNMENT. THIS LABEL MUST HAVE THE NEW FORMAT FOR THE NUTRITION INFORMATION PORTION ("NUTRITION FACTS"). DO NOT SUBMIT A LABEL WHICH CONTAINS THE OLD NUTRITION INFORMATION FORMAT. IT WILL NOT BE GRADED. SECURELY ATTACH THE LABEL ... or Xerox copies ... TO THIS ASSIGNMENT. You will need to refer to the label (or copies) in order to complete the assignment. We will need the label to determine whether or not you have answered the questions correctly.

If you find it absolutely impossible to get a food label, contact the instructor. YOU MUST ATTACH A LABEL (OR COPY) TO THE ASSIGNMENT.

A. UNDERSTANDING AND USING THE FOOD LABEL

1. The food label is usually divided into two panels. What are they?
   a. ______________________________________________________
   b. ______________________________________________________

2. What pieces of information are found in each part?
   a. (1) ___________________ (2) ___________________
   b. (1) ___________________ (2) ___________________ (3) ___________________

3. Using your label, give examples.
   a. (1) ___________________ (2) ___________________
   b. (1) ___________________ (2) ___________________ (3) ___________________
4. There are three nutrients that used to be listed on the nutrition label, but now are optional. What are they?
   a. ___________________  b. ___________________  c. ___________________

   Why do these nutrients no longer need to be listed?
   ________________________________________________________________
   ________________________________________________________________

5. If your energy needs were 2000 kcal/day, what % of your DV for a) total fat, b) sodium, and c) dietary fiber would be met by one serving of your product?
   a. ___________________  b. ___________________  c. ___________________

6. If your energy needs were 2000 kcal/day, what % of your DV for a) total fat, b) sodium, and c) dietary fiber would be met if you consumed the whole package/can of your product? (show calculations)
   a. ___________________  b. ___________________  c. ___________________

7. If your energy needs were 2500 kcal/day, what percent of your DV for a) total fat, b) sodium and c) dietary fiber would be met by one serving of your product? (show calculations)
   a. ___________________  b. ___________________  c. ___________________

8. For labels on foods for children under two years, what nutrition information will not be included?
   a. ___________________  d. ___________________
   b. ___________________  e. ___________________
   c. ___________________

   Why? ________________________________________________________________
   ________________________________________________________________

9. Labels on foods for children under four years will contain macronutrient information only on protein. Why?
   ________________________________________________________________
   ________________________________________________________________

10. What is a serving size of your food? _________________________________________________________________
Basic Calculations for FSHN 185

Calculating percent of kcal from grams of various macronutrients:

This calculation is made for individual foods as well as meals, or total daily food intake. You must know the total kcal in the food, meal, or daily intake and the amount of the various macronutrients and/or alcohol (usually given in grams).

Example: a meal has 878 kcal with 26 g FAT, 110 g CHO, 30 g PRO, and 12 g ALC.

% of kcal from Fat: \[ \frac{9 \text{ kcal/g} \times 26 \text{ g of FAT}}{234 \text{ kcal fat/878 total kcal}} = 0.27 \]
\[ 0.27 \times 100 = 27\% \text{ of kcal from fat} \]

% of kcal from CHO: \[ \frac{4 \text{ kcal/g} \times 110 \text{ g CHO}}{440 \text{ kcal CHO/878 total kcal}} = 0.50 \]
\[ 0.50 \times 100 = 50\% \text{ of kcal from CHO} \]

% of kcal from PRO: \[ \frac{4 \text{ kcal/g} \times 30 \text{ g PRO}}{120 \text{ kcal PRO/878 total kcal}} = 0.14 \]
\[ 0.14 \times 100 = 14\% \text{ of kcal from PRO} \]

% of kcal from ALC: \[ \frac{7 \text{ kcal/g} \times 12 \text{ g ALC}}{84 \text{ kcal ALC/878 total kcal}} = 0.10 \]
\[ 0.10 \times 100 = 10\% \text{ of kcal from ALC} \]

Note: the sum of the percentages in this case totals 101%. This happens because we have rounded off each number (and 3 of the 4 were rounded up) before multiplying by 100 to get percentage. For practical purposes, this is very rarely of concern since 1 percentage point for a macronutrient is relatively inconsequential. That’s why I have just given 10% of kcal from ALC instead of the unnecessarily more accurate 9.57%. We don’t need to worry about the small stuff.

Calculating grams of macronutrients from percent of kcal:
(Using a daily intake of 2200 kcal)

30% of kcal from fat: \[ 0.30 \times 2200 \text{ total kcal} = 660 \text{ kcal from fat} \]
\[ 660 \text{ kcal fat/9 kcal/g} = 73 \text{ g fat} \]

The other macronutrients are calculated in the same fashion, using the appropriate value for calories per gram of macronutrient (4 for CHO, 4 for Protein, and 9 for Fat). Alcohol also contains calories. Use 7 kcal/g for Alcohol calculations.

Calculating Body Mass Index (BMI): Just remember it’s body weight in kg divided by height measured in meters squared: kg/m² Desirable BMI values range from 19 to 27 depending on age. See page 275-276 in C&G for desirable BMI in relation to age.